## II. AMENDMENTS TO THE CLAIMS

Please replace the title of the application on page 1, line 1 with the following amended title:

Tetragonal Protein Crystals ~~Structure~~ of AMP Deaminase

Please amend page 9 of the specification as follows:

Please add the following new heading before line 13 which starts with "Figure 1":

**Brief Description of the Drawings**

Please amend lines 19-20 on page 9 as follows:

**Figure 3A** shows the structures of coformycin ~~(A) and UK-384,858 (B);~~ atom positions are numbered for the seven membered ring system of coformycin;

Please add the following new paragraph after lines 19-20:

**Figure 3B** shows the structure of UK-384,858;

## II. AMENDMENTS TO THE CLAIMS

Please amend the claims as follows: Cancel claims 2 and 25 without prejudice to Applicants' right to file divisional applications directed to the subject matter thereof.

Claim 1 (Currently Amended) An isolated AMP deaminase (AMPDA) crystal consisting essentially of the AMPDA catalytic domain wherein said crystal is tetragonal.

Claim 2 (Cancelled)

Claim 3 (Original) The crystal of claim 1, wherein said AMPDA is from a mammal.

Claim 4 (Original) The crystal of claim 3, wherein the AMPDA is from a rabbit.

Claim 5 (Original) The crystal of claim 4, wherein the sequence of said AMPDA consists essentially of amino acids 96-747 of SEQ ID NO: 2.

Claim 6 (Original) The crystal of claim 1, wherein said crystal is grown using citric acid as a precipitating agent.

Claim 7 (Original) The crystal of claim 1, wherein said crystal is grown in the pH range of 7.80-8.20.

Claim 8 (Original) The crystal of claim 1, wherein said crystal is grown in the presence of imidazole.

Claim 9 (Original) The crystal of claim 1, wherein said crystal has a space group P4.sub.22.sub.12.

Claim 10 (Original) The crystal of claim 1, wherein said crystal has unit cell dimensions of a=b=149 .ANG. +/-3 .ANG., c=159 .ANG.+/-3 .ANG..

Claim 11 (Original) The crystal of claim 1, wherein the active site of said AMPDA is contained in a cleft formed by additional helices between first and second strands of a (.beta..alpha.).sub.8 barrel fold, and a helix immediately following a third strand.

Claim 12 (Currently Amended) The crystal of claim 1, wherein said AMPDA has a pocket which can accommodate the adenosine group of AMP, which pocket is formed by amino acid residues including residues His305, Phe372, Phe375, Asp513, Glu575, His594, and Asp650 of Seq ID No. 2.

Claim 13 (Currently Amended) The crystal of claim 1, wherein said AMPDA has a pocket which can accommodate the ribose and phosphate groups of AMP, which pocket is formed by amino acid residues His305, Ala306, Ala307, Ala308, Phe375, Asn376, Tyr379, Arg388, Lys393, Ser427, Tyr429, Pro460, Ile462, Val512, and Asp513 of Seq ID No. 2.

Claim 14 (Original) The crystal of claim 1, wherein said crystal diffracts X-rays to 3.5 .ANG. or higher resolution.

Claim 15 (Original) The crystal of claim 1 further comprising heavy metal atoms.

Claim 16 (Original) The crystal of claim 1 further comprising an AMPDA inhibitor that has been soaked into said crystal.

Claim 17 (Original) The crystal of claim 16, wherein said inhibitor is an AMPDA transition state analogue.

Claim 18 (Original) The crystal of claim 17, wherein said inhibitor is a cofornycin analogue.

Claim 19 (Original) The crystal of claim 18, wherein said inhibitor is cofonnycin or 3-(2'-(3"-carboxynaphthyl) ethyl) coformycin aglycone.

Claim 20 (Original) The crystal of claim 1, wherein the primary sequence of said AMPDA has 90% or higher identity at the amino acid level to the sequence shown in SEQ ID NO:2.

Claims 21-24 (Cancelled)

Claim 25 (Cancelled)